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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

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REPORT FOR WEEK ENDING APRIL 16, 1927.

JUDITH BASIN:

The past winter has given about average mean temperatures with periods of five to six days in each month from November to February when the minimum was well below zero. The minimum temperature of the winter was 33 degrees below zero on January 21. A light covering of snow protected the fall sown crops on this date.

Precipitation for November was slightly above normal. Since December, precipitation has been less than average. Snowfall was light and generally melted or was blown off the fields, thus leaving the ground bare most of the winter. Notwithstanding this lack of protection, winter wheat survived with good stands.

Soil blowing in the Judith Basin has not been serious this winter.

Farmers generally report that their winter wheat came through the winter in average shape.

Field work was begun on April 4, with the working down of rotation plats in preparation for small grains. Plowing on the rotations was stopped by a storm on the 8th.

Light snow with rain has fallen intermittently on five days during the past week.

Director F. B. Linfield visited the station on March 22 and 23, and Professor Clyde McKee on April 8 and 9.
Maximum temperature 45, minimum 14; precipitation 1.05 inches.

HUNTLEY:

Climatic conditions during the past winter did not deviate greatly from the normal in this locality. Below zero weather was generally of short duration and temperatures lower than 10 below zero were exceptional. The minimum for the winter was 30 degrees below zero.

Precipitation for November and January was above normal but the remaining months from October to March, inclusive, were less than normal in this respect. March was especially deficient in the amount of moisture received, but .12 inch having fallen this year as compared to .79 inch for the 16-year average. Precipitation from April 1 to date has been very heavy. Rain and snow has fallen daily since April 8 and the total amount received from the storm so far is 2.78 inches. As this precipitation has come slowly, most of the water has entered the soil and will not only insure good stands of crops this spring but will add greatly to the supply of moisture already in the ground.

Huntley, continued:

Weather during March was generally mild and pleasant. A few windy days with some soil blowing were encountered but damage from this source was much less than that of a year ago. Soil drifting was absent on the plats, although on some of the larger fields in the vicinity small areas of winter wheat will have to be reseeded.

Field work on the Dry-Land project was begun on March 28 and all land for small grains is now ready for planting. Seeding was delayed in orde to give the land an extra cultivation just previous to drilling for the purpose of killing out weeds and volunteer grain.

Maximum temperature 49, minimum 24; precipitation 2.58 inches.

SHERIDAN:

The past winter was about average for this section. Severe cold weather was experienced each month of the winter, the coldest being -31 degre in January. Average temperatures, however, were not far from the station normal. Precipitation was light but was slightly above the station average for the entire period from November 1 to March 31. Wind movement for the most of the winter was low. There was little drifting, and there was some snow on the ground the most of the winter. Runoff was heavy when the snow melted about the first of March, and there was considerable washing of some of the fields.

Precipitation for March was slightly above the average. The ground dried slowly and no field work was possible until late in the month. The The north two-thirds of Field A, block A, which was broken up from alfalfa sod in 1926 was prepared for seeding March 29. This field was seeded to Brome grass and Crested Wheat grass in alternate strips for pasture, April 2. The south edge of this part of the field was seeded to small blocks of different grasses, both by themselves and in different mixtures.

Crested wheat grass and Brome were beginning to show some growth March 24. Native grass did not show any growth at that time. Winter wheat showed appreciable growth the last week in March and the first week of April. A good stand of this crop appeared on all seedings except on some of the fall plowed plots in the rotation field. Volunteer grain is thick in spots on these plots, as usual.

The first date of seeding was made April 2 with spring wheat, oats, and barley. The rotation field was prepared for all early seeding the week of April 9, and was staked for seeding the 9th. Spring plowing for other early seedings was completed during that week. Spring plowed plots worked up better than for the past two seasons, but were still rather wet when plowed. Some breaking was done with the tractor on the new land south of the rotation field.

Sheridan, continued:

An exceptionally heavy wind for this section blew almost all day, April 8, causing considerable soil blowing. At this time the soil contained a fair supply of moisture only to a depth of one foot. Snow began to fall April 9, and some snowfall has been recorded every day since. Melting has proceeded steadily, but there is now about 12 inches of snow on the ground, with no drifting. This is the heaviest snowfall recorded at the Sheridan Weather Bureau Station. It is estimated that about 10 per cent of the early seeding had been completed before the storm.

Precipitation by months from November to April, to date, as compared with the station average from 1917 to 1926, was as follows:

	Nov.	Dec.	Jan.	Feb.	March	Apr.1-9	April 10-16.
Average	.68	.53	.64	.39	.87	(total for month)	2.07
1926-1927	1.27	.33	.57	.19	1.17	.18	2.68

Maximum temperature	66°	40°
Minimum temperature	25°	24°

DICKINSON:

The fore part of the week was favorable for field work but the past two days were too wet for outside jobs. A slow rain began falling on the morning of the 15th and continued through the most of the 16th, amounting to .84 inch. The total rainfall April 1-16 was 2.02 inches.

Although the winter precipitation was about normal in amount, the water had penetrated only a few inches, so that deep plowing turned up dry soil. Recent rains have wet through the first foot, but most of the second foot and below is still dry on land that was in grain last year.

Field tillage was started on April 5. Wheat on the rotations was seeded April 8 and 9. Oats were seeded April 11, and barley on the 13th. Wheat varieties were seeded April 14. The land is ready for seeding the other cereal varieties when it is again dry enough.

About half of the wheat on farms has been seeded. There appears to be about a normal acreage of wheat being planted in the locality.

The winter was not unusually severe at Dickinson. A minimum temperature of 33 below zero was recorded in January. The cold spells were were usually of short duration. The frost was out of the top soil by March 15, and only light freezes have occurred since.

Maximum temperature 56, minimum 24; precipitation .85 inch.

MANDAN:

Agronomy

The past winter in general was mild and pleasant. The temperature averaged somewhat below normal for November and December, but above normal during January and February. March was a mild month. There were no severe storms or unusually low temperatures during the winter.

The snowfall for the winter was light. The heaviest snows came in March, and lasted only a few days.

April to date has been cloudy and cool. There has been no sunshine so far this month, and the soil remains cool.

Feed was scarce throughout this area during the winter, and a good deal of hay was shipped in.

The ground is in excellent condition for crops. Moisture is sufficient for crops at present, and all crops should start off under good conditions.

Some seeding of wheat was done in the county around March 20. Seeding in general has been delayed because of damp weather.

Work started on the rotation plots early in April. The cultivation of the plots was delayed two or three days by rainy weather.

A small seed block of wheat was seeded on March 30. This grain has germinated, but is not up. The wheat in the rotations was seeded on April 14. This is four days ahead of the average seeding date. Rain has delayed further seeding, and it will, no doubt, be early next week before any more seeding can be done.

Crested wheat grass started growth about March 20, and brome grass about April 1. Crested wheat grass would be fit for pasture at this time. Alfalfa and sweet clover show very little growth at this time.

Following is the precipitation for the year: January, .18 inch; February, .14 inch; March, 1.17 inches; April to date 1.16 inches. The precipitation for the year to April 1 was 1.49 inches, as compared with the 50-year average of 1.88 inches.

Maximum temperature 47, minimum 28; precipitation .78 inch.

Horticulture

General routine work in the greenhouse, such as seed sowing, transplanting and potting of vegetables and flowers, has been carried on during the last two weeks. An excellent stand of 1926 selections of tomatoes has been secured, and transplanting to coldframes will take place next week.

Field work with vegetables has consisted of cultivating of asparagus plantings, and harrowing and preparing the Acre and Coulee gardens for planting. The ground is in a very favorable condition for seed planting at the present time, due to the recent precipitation.

Arboriculture

Shipment of shelterbelt planting stock was started on April 4, and completed on April 9, with the exception of conifers, which will be shipped the last of April.

About 40,000 small Caragana seedlings were lined out in the nursery during the four days of April 11 to 14.

The winter just past being comparatively mild, and there being no snowfall of depth enough to impede car travel, farmers and others have, throughout the winter, freely visited the station seeking information and assistance in planning the coming season's work.

Among the recent visitors were the following: J. L. Record, Chairman of Board, Minneapolis Steel and Machinery Co., seeking information on tree growing; J. McInstry, Fort Yates Reservation, Fruit trees for the Indians on the Fort Yates Reservation; J. A. Munro, Entomologist, North Dakota Agricultural College; M. A. Bell, Assinniboine Field Station, Havre, Montana; Dorso Skeels, Professor of Forestry, University of Montana, Missoula, Montana; C. A. Carmen, Vice President, Hankinson Nursery Company; some 20 students (8th grade) with instructor, from the Sweet Briar, North Dakota, Public Schools; seven Indian Reservation superintendents who were attending a conference in Bismarck, N. Dak., and wished information on agricultural subjects; County Agents from several counties, generally with farmers.

A large call for Department bulletins has been experienced; prehaps more particularly for "Dry Land Gardening", No. 1427. Several County Agents have requested second and third supplies of this bulletin.

ARDMORE:

The winter of 1926-27 was mild. Precipitation was low and at no time was there over three inches of snow on the ground. Much of the time the ground was bare.

Field work at the station commenced on March 16. All of the grain in the fields and the field rotations was planted in March. A snow storm on the 30th and 31st of March stopped field work until April 6. The wheat and oat varieties, and the wheat and oats in the rotations were planted April 8 and 9.

Ardmore, continued:

A rain of .63 inch on the night of April 9 was followed by an entire week of stormy weather. Precipitation in the amount of over three inches, consisting largely of snow, fell from April 10 to 16. Much of the snow melted as it fell but by the night of April 14 there was approximately 18 inches of snow on the level. High northeast winds drifted the snow badly and roads throughout the section are in practically impassable condition. Train service on the main line of the Burlington was interrupted for nearly two days.

The precipitation for the week was as follows:

April 9	.63	inches
" 10	.13	"
" 11	.65	"
" 12	.26	"
" 13	1.25	"
" 14	.84	"
" 15	.02	"
Total	3.78	"

The precipitation for the year is as follows: January, .22 inch; February, .34 inch; March, 1.14 inches; April to date 3.99 inches.

The maximum temperature for the week was 68 and the minimum 24. For the period from April 11 to 15, the temperature ranged from 24 to 33.

ARCHER:

The fall of 1926 and the winter of 1926 and 1927 were rather dry. The total precipitation from September to March, inclusive, was 2.86 inches. The fourteen-year average at this station is 4.68 inches. The temperature on the whole was mild. The wind velocity during February was high and soil blowing was very severe. This was very bad for the winter wheat which had already been greatly weakened by excessive grazing by rabbits. All wheat seeded with the common drill was killed and the stand of that seeded with the furrow drill has been greatly reduced. In some instances it has been smothered by soil blowing from adjacent land.

The latter part of March and the first nine days of April were favorable for spring work. During this time nearly all Dry-Land plats were plowed, some duckfooting accomplished and some sod broken. Most of the manure was hauled.

Archer, continued:

From Sunday night, April 10, to this date there has been a continuous storm. Tuesday, Wednesday and Thursday a severe blizzard was in progress piling up great drifts of heavy snow. The total precipitation to date for April is .87 of an inch. The total for the storm was .77 of an inch.

Winter wheat generally is in good condition and the farmers are optimistic. The grass has made an early start and ranching prospects are unusually bright.

HAVRE:

The winter season in this section of Montana was rather severe. This was due largely to the fact that there was a heavy snowfall with very few chinook periods. Snow which fell in early December lasted until the first part of March on practically all of the plains section. There was no extremely cold weather, however.

Stock losses, especially horses, were very heavy. The snow ran down to a partial ice cover so that it was impossible for horses to graze. Owing to the length of the feeding period and the scarcity of feed, there were quite a lot of cattle lost also.

Field work was started during the week of April 4. On the night of April 8 we had one of the heaviest snowfalls for this section of Montana. This was accompanied by a very strong wind, resulting in severe drifting, some being from 10 to 12 feet deep. The past week has continued cool and cloudy and only a part of the snow has melted. At the best it will be nearly a week before any field work can be done. Conditions should be very favorable for both grass and crops. Grass, even under the snow, has made a little start and all that is needed is a few warm days.

There has been some winter killing of winter wheat. The past storm period should be of a great deal of benefit to this crop. There is very little killing in winter rye and it has made a fair start this spring. This is the latest spring since the station was started. The following are the maximum, minimum, and mean temperatures and precipitation, November to March, inclusive:

MONTHLY METEOROLOGICAL SUMMARY TAKEN FROM THE U. S. WEATHER BUREAU AT HAVRE, MONTANA.-November to March.

Month	Actual Maximum	Actual Minimum	Mean	Normal Mean	Precipitation
November	68	-12	25.9	31.2	1.17
December	54	-18	16.2	20.4	.40
January	55	-37	13.4	12.9	.56
February	48	-26	15.1	13.6	.55
March	61	5	32.6	47.0	.49
April (1st half)	61	20	----	----	1.55

BELLE FOURCHE:

The past winter was unusually dry, and strong winds caused considerable soil blowing. The weather during March continued quite dry and cold, and practically no plant growth had taken place by the end of March. The dry weather and soil blowing apparently were quite injurious to winter wheat and a number of plats of winter wheat on the rotations are still in a doubtful condition.

The heaviest snow storm on record, or in the memory of old time inhabitants, occurred during the present week. A total of 2.68 inches of precipitation was received in the form of snow in a storm of nearly five days duration. Although over 30 inches of snow fell, sufficient thawing and settling took place each day that the depth of undrifted snow remained around 20 inches.

Two days prior to the snow storm over half an inch of precipitation was received in the form of rain and snow, and the total precipitation for April to date is 3.73 inches. This is nearly an inch greater than the previous record maximum precipitation for the entire month of April. Since March 30, a total of 4.62 inches of precipitation, mostly in the form of snow, have been received.

Only a small amount of field work has been possible, and field operations probably cannot be resumed for at least another week. All of the small grain plots on the dry land rotations, with the exception of those green manured and fallowed, have been prepared for seeding.
Maximum temperature 64, minimum 24; precipitation, 3.23 inches.

AKRON:

The spring on the whole has been favorable. There was some soil blowing during January and February but not repeated often enough to do any very widespread damage. Rains and snows since March 1 have prevented a continuance of the soil blowing. Moisture to date is ample and the spring at this date is the most favorable of any experienced since 1922. Total precipitation to date is 5.56 inches, whereas the 19-year average for the same period is 2.74 inches.

The oat and barley varieties, and the peas, oats, barley and spring wheat plots on the Main Rotation field were seeded promptly about the first of April. It was near the first of April before any field work could be attempted. Thus the main portion of the early spring seeding was accomplished before the recent rains which have kept teams from the field for a whole week.

Akron, continued:

Winter wheat, unless seeded on corn land or on stubble land, or unless seeded very late, emerged to stands last fall. The winter passed without snow covering; what few snows fell melted almost immediately. Winter wheat, today, reveals some winter killing damage but it is yet too early to accurately estimate. The outstanding winter killing damage appears to have been on the winter wheat varieties on corn land, on the M. C. Series, and on fall plowed stubble plots on the Main Rotation field. Winter wheat where injured around the edges of the plots last fall by grasshoppers has not come out. For the first time in three years there appears to be an excellent prospect for winter wheat on the Rate and Spacing corn experiment land.

The past week has been cloudy every day, rains and snows falling at intervals. Towards the end of the week, snow drifted badly so that the full benefit of the snows will not be realized by the fields.
Maximum temperature 73, minimum 22; precipitation, 1.80 inches.

NORTH PLATTE:

The winter was dry up until the early part of April. A slight amount of soil blowing occurred in March but the damage done was slight in comparison with that of last year. Winter wheat survived with good stands on early plowing and fallow, and with about 75 per cent stands on corn ground. On late plowing only about 15 per cent survived.

During the past week 3.25 inches of rain have fallen. Most of this fell slowly and entered the soil with but little runoff. This is the most abundant moisture which has been received for several years and starts the season with the best crop prospect since 1923.

Field work was begun March 25. Crop rotations were seeded April 2-6. First seedings are up with good stands.

COLBY:

Soil blowing has been the principal factor affecting crop growth in Northwest Kansas this past winter and spring. The year 1926, with only 10.58 inches of moisture produced but very little vegetative growth that was left on the ground and the soil was sufficiently dried so that blowing occurred at various times during the winter. The winter precipitation was in excess of normal and a blizzard the middle of March might lead one to think that soil movement would be at a minimum, but such was not the case. Two of the worst dust storms that this country has ever experienced occurred on the afternoon of March 31, and the morning of the 4th of April. The only way that they could have been worse was for them to have lasted longer.

Colby, continued:

Winter wheat actually appears worse than usual at this time of the year. There are many fields, scattered over the county (mainly where heavy rains fell in August or September last year), where the wheat has a very good color, growth and stand. There are many more fields where the stand is so thin that seed could not even be produced. In the immediate vicinity of Colby there is very little wheat left. The wheat in most fields did not get a good start last fall and the winter winds dried the small plants out and in many cases blew them out. Considerable listing was done to prevent soil blowing. More has been done since the soil movement on the 4th of April than was done previously. Wheat on the station has been damaged considerably by blowing soil. There are no soil drifts of any size on the station but the movement of the soil across the plats has exacted its toll.

Spring grains, barley, oats, and spring wheat, have emerged to an excellent stand and have a good color and growth. Early spring working of the fields has been delayed due to windy weather. Most of the commercial fields have been listed during the winter.

The principal work the past week or ten days has consisted in the planting of trees and shrubs. These consisted of grape vines and plum trees in the orchard and ornamental trees, shrubs, and vines around the station grounds.

The past week brought the largest rain and best rain for two years. An even inch of rain fell during the day and evening of the 13th. This should show whether the thin wheat will pay to leave. A large acreage of corn is expected.

HAYS:

Apparently spring has arrived early this year. There has been no frost for two weeks or more and generally warm weather during most of February and March.

Barley was sown on the commercial fields in February and the spring preparation of plats on the project for spring small grains was finished during February. However, the spring grains were not seeded on the plats until early the second week in March. Ideal growing conditions since that time developed a prompt germination, resulting in excellent stands of barley, oats, spring wheat, peas and brome grass. All these crops are making fine growth and never looked any better, if quite so good, this early in the spring on the project.

Hays, continued:

In spite of the fact that the six months period July 1 to December 31 last was the fifth driest during the last 21 years, a rainfall of .04 inch for January, .98 inch for February, 1.85 inches for March and 2.26 inches for April to date, together with warm weather, has developed an unusually heavy growth of winter wheat on all methods except continuously stubbled in and late fall disking. Rains the past two weeks have especially pushed the wheat forward. Already the wheat has been lodging more or less on fallow. The growth on three year fallow, Rotation 570, after a light rain about a week ago accompanied with a moderate wind, lay as flat as if it had been run over with a heavy roller. The growth on fallow averages about 10 inches high. On other methods it ranges all the way from two inches to six. The growth is entirely too heavy on all methods for the amount of moisture in storage. On fallow wheat roots have already been found feeding in the fifth foot.

All pastures are green but not yet sufficient growth to furnish much pasture. Plum, peach, pear and apple trees are in full bloom. Cherry and redbud are coming in to bloom. Early wild flowers are blooming. Alfalfa on bottom land is 12 inches high. Forest trees are coming into leaf.
Maximum temperature 76, minimum 35; precipitation, 1.78 inches.

GARDEN CITY:

The past winter was a dry one. The normal precipitation from September 1 to April 1 is 6.38 inches. Only 3.76 inches of rainfall were recorded during the past seven months period. Since April 1.09 inches additional precipitation have been received. No killing frost has occurred since April 1.

In spite of the dry weather prospects for winter wheat are fair at this time. That crop is very spotted. Most wheat on fallow looks good. Little damage from soil blowing has taken place on the station, but several nearby fields were almost destroyed by February and March winds. The spring small grains have emerged to good stands.

Some spring plowing and listing have been accomplished on the project. There is enough moisture in the surface soil to make it work well.
Maximum temperature 82, minimum 32; precipitation, .50 inch.

DALHART:

This portion of the panhandle has been very dry and windy since January 1. The past week has been more favorable than the entire time previous. Up until this week only .59 inch precipitation had been recorded and this amount in very small amounts.

Dalhart, continued:

The first good precipitation of the year fell on the 13th with a snow during the night. The record of this rain and snow totaled .83 inch. This was the heaviest snow recorded here this year. The temperature dropped to 27 but did not kill any of the fruit. There was no runoff in this rain since it was a day and night in falling.

The only field work on plots this spring is the preparation and planting of oats. This was done on March 22. Other field work has been done in way of cultivation for prevention of blowing, cutting of stalks and fencing oat plots, etc. Several plantings were made on different dates in a sweet clover planting test. This is new work, started on January 15.

Considerable nursery stock has been planted this spring. A number of re-plants were made in the vineyard and nine new varieties set out. A small orchard was put out consisting of three varieties of cherries and one crab apple. This orchard will be watered when necessary for a comparison with the other orchard which is not watered. A number of evergreens were put out this spring for windbreaks.

Winter wheat and rye over this section, (wheat especially since little or no rye is grown) havesufferod considerably. Some farmers report a large acreage of winter killing due to soil blowing. The wheat and rye on the station hevesurvived the dry conditions in good shape and has made good growth. The winter rye showed more signs of suffering than the winter wheat. Both of these are jointing at this time. The wheat and rye on summer fallow are showing up exceptionally well. Oats are up to a good stand, having emerged April 5. There was a fair amount of moisture on these plots to a depth of three feet at the time of planting. Plots which were fall plowed had dried out to the depth of the plowing.

Some oats were planted today on the block to be used for sweet clover date of planting work this fall. This late planting will serve two purposes. One will be to see what they will do when planted this late, and the other is that a stubble will be present for the seeding and protection of clover. The date of planting clover has not emerged at this writing except for scattering places which died.

TUCUMCARI:

Since December 24, only .51 inch precipitation has been received, making this one of the driest winters in 21 years. December was somewhat higher than normal in precipitation and this accounted for winter wheat on the plains south of here coming through the winter in very good condition. Within the past month drought and wind injury have been high. Many fields still may make fair to good yields, while in other fields all plants are dead. Last April and May were unusually high in rainfall, but every month since, with the exception of December has been below its long time average.

Tucumcari, continued:

Precipitation since October 1, six and one-half months, has totaled 2.34 inches. Much listing was being done a month ago, but the soil is now so dry this work has been generally postponed. Station land cropped to cowpeas last year is now so dry as to make listing unsatisfactory, while soil samples taken on M. C. milo plats ten days ago showed moisture content low on all but the fallow plot.

Pastures have been good throughout the winter and cattle are in good condition. Unless rains are received soon, spring grass will be late and scarce.

All fruit trees are blooming very heavily, except where the severe freezes of March 20 and 21 killed some early peaches then in bloom. The last killing frost occurred on March 22 and if no frost occurs to injure fruit, prospects point toward an abundant crop. Most peaches were in bloom about April 1, as were the plums, while cherries and apples of different varieties have been, or will be, in full bloom from about April 6 to 18. Some spraying has been done the past week.

Wind movement has been about usually severe this spring, but soil blowing has been held to a minimum by cultivating and listing. No attempt has been made to prepare land for the May 1 date-of-planting forage sorghum test and unless rain is received, listing will be the only possible means of securing a stand.

During the past week raking of lawns was completed, a portion of the orchard was sprayed, stakes painted, some shrubs and trees watered, seed treated, and other miscellaneous spring work done.

Maximum temperature 84, minimum 31; precipitation .03 inch.
Average hourly wind velocity, 7.6 miles. Evaporation 1.903 inches.

BIG SPRING:

Weather conditions during the past winter could be characterized as unusually mild with considerably more than the normal amount of rain falling during this period.

The following table shows the rainfall for the winter months as compared to the 26-year average for the same time:

	November	December	January	February	March
1926-1927	.32	2.19	.53	1.69	.27
26-year average	1.14	.51	.39	.64	.84

Big Spring, continued:

The minimum temperature for the winter was 14 degrees above zero. There were only a few occasions when the temperature was below 20.

As a result of the warm weather the fruit trees blossomed unusually early. On March 20 a light freeze killed the apricots and about 50 per cent of the peaches, but the rest of the fruit was not injured to any appreciable extent.

Wind velocity has been low with very little soil blowing taking place.

During the past week the harrow has been run over the fields to rough up the soil which had been packed by a recent rain.

The first date of planting with 12 varieties of grain and forage sorghums and cotton was made on April 15. The April date of planting with sweet clover was also made on this date.

The January and February planting of the hulled and scarified and partially hulled and scarified seed has emerged to good stands. The unhulled and unscarified have only a few scattered plants on them.
Maximum temperature 91, minimum 38; precipitation .39 inch.

LAWTON:

Farm operations were retarded throughout the winter by disagreeable weather. Temperatures were not severe for this section but the winter rainfall was heavier than usual. Cotton picking continued throughout the winter and in many fields late in the spring as the weather permitted. As a result of these conditions but little other farm work was done except seeding of oats and much of that was late.

Freezing temperatures March 19 to 22 killed most of the peaches, plums and pears in this section. A few late plums, apples, grapes and small fruits now show fair prospects.

A high wind velocity was common throughout March and two or three high records were obtained in February.

The first half of April brought wind storms and floods to the southern part of the state with much loss and damage to property. Rainfall records at the station from March 29 to April 13 equaled 4.88 inches but this was apparently far lighter than in many other parts of the country and in adjoining counties to the northeast.

Lawton, continued:

Creeks throughout the county overflowed frequently with severe damage to many farms, public highways and railroads. In the northeast part of the county a storm on March 6 evidently reached cloud-burst proporations and farm lands were heavily damaged by erosion. Field operations, which have been at a standstill on the station for about two weeks are just now being resumed.

Winter wheat and winter barley came through the winter in fine condition, which at the present could not well be improved. On the station plats, wheat ranges from 14 to 24 inches in height and presents a healthy, vigorous condition. Winter barley is heading and rye is practically in full head. Oats and spring barley are also making satisfactory growth.

Some complaint of green bug damage to wheat has persisted all spring but as yet the injury is very small. None at all was observed on the station.

Oat varieties were seeded February 7, and poor stands were obtained on nearly all varieties. This was the only instance where germination was unsatisfactory in the small grain seedings. In the rate and date tests, seeded February 3 to March 10, good stands were obtained in all instances as well as on the rotation plats.

In the sweet clover seeding project fair results have so far been secured. In the sweet clover nursery the four Suaveloens strains, one of which is the Redfield (South Dak.) Yellow, are at present outstanding in growth and appearance. Spring growth of these strains now in the second year is 18 to 24 inches high.

Corn planted March 6 germinated quite well but was washed out in several places.

Alfalfa is making a rapid, vigorous growth and promises a heavy first cutting.

Water logged fields prevented the April 15 planting of cotton and sorghums, but it is probable that this work will be done in the near future.

Fields that were prepared for early planting are rapidly becoming weedy and the surface soil is tightly packed by the torrential rains that have been so common this month.

WOODWARD:

The season to date has been characterized by many small rains and foggy, cloudy weather. These have delayed work in the fields, but as 90% of land in Northwest Oklahoma is in wheat there is not much field work to be done. With the low price of kafir and milo there is not much incentive to raise them. Many farmers having acquired tractors, which are better fitted for wheat than for row-crop farming, it is likely that wheat will become almost the exclusive crop raised for some years to come. This section has been as thoroughly diversified as any could well be, and has been known for its butter, eggs, poultry, and beef.

The weather to date has been as favorable to the wheat crop as could be, keeping it in nice growing condition, but not forcing it, except on fallow where it is too rank.

It is probable that this will be one of the rare years with an abundance of fruit. Even the apricots, the blossoms of which are almost always killed, will bear this year. Many orchards, especially of peaches, were planted years ago, and while they have been grossly neglected, in favorable years still yield much fruit.

On the station, work to date has consisted of pruning of grapes and orchard and shade trees, threshing of grain carried over winter in the head, grading roads and planting nursery stock. Nine varieties of corn were planted yesterday, April 15, in the corn-variety test. A date-of-planting test of hulled, scarified, partly hulled, and unhulled sweet clover seed was started on the Dairy farm January 29. Since then three more plantings (seedings) have been made, on the 15th of each month to date. One-tenth acre of Jerusalem artichokes were planted yesterday, the 15th.

Maximum temperature 87, minimum 38; precipitation .41 inch.
Average hourly wind velocity, 6.6 miles. Evaporation 1.359 inches.

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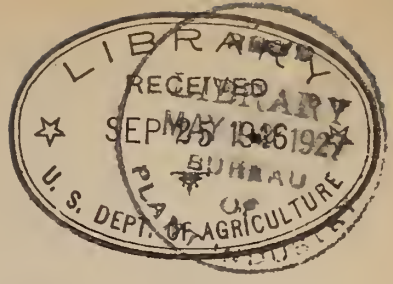

WEEKLY STATION REPORTS

OF THE OFFICE OF

RY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 23 1927

REPORT FOR WEEK ENDING APRIL 23, 1927.

HAVRE:

The first part of the past week was unusually cold. The minimum temperature of 11° on the 19th was the lowest ever recorded for this season. Snow of a week ago is all gone with the exception of drifts. These drifts are delaying field work very badly.

The date of seeding grasses and grains was seeded on the 21st. These happened to be on land where the snow had blown off.

Field work is very badly delayed all over this entire section and a few warm days are needed to dry the surface and start grasses.

The maximum of 60° on the 22nd was the warmest of the season. Only a trace of precipitation was recorded this week.

JUDITH BASIN:

The past week has been unseasonably cold with light flurries of snow on four days of the week. The temperature dropped below freezing each night with a minimum of one below zero on the 20th. This is the lowest temperature this late in the season on record at this station. A light covering of snow protected the winter wheat on the coldest night and no damage has been noted up to this date.

Very little growth has been made by the cereal crops. Crested wheat grass has commenced growth and brome grass is just starting. Trees on the station have barely commenced budding.

Field work has been delayed, although on the last day of the week ground was cultivated and the first seeding for wheat, oats and barley in the date of seeding test on the cereal project was completed.
Maximum temperature 55, minimum -1; precipitation .02 inch.

HUNTLEY:

The snow and rain storm begun on April 8 continued until April 20. During this period the precipitation received amounted to nearly three inches. The total for April to date is 3.19 inches, which is 2.03 inches above the average for the month. Coming slowly, as it did, practically all of this moisture entered the ground, even grass hillside showing hardly a trace of runoff.

Huntley, continued:

Unseasonably cool temperatures were recorded during the week, but, so far, nothing has shown the effects of the hard freezes experienced. Winter wheat and rye, alfalfa, tame and native grasses have made considerable progress, notwithstanding the wintry conditions of the past week. Bright weather and warm winds during the last day or two have done much toward drying up the surface but the fields are yet too wet for work.

Neighboring farmers are reporting slight damage to young grain crops from cutworms this spring. The infested areas seem to be small and widely scattered at present but it is yet too early to tell how serious the infestation may be.

Maximum temperature 61, minimum 19; precipitation .40 inch.

SHERIDAN:

No field work has been possible during the week. Two snowfalls were recorded early in the week. The weather since has been cold, until yesterday, the 22nd, and melting of the snow has been slow. The rotation field is still covered with from 2 to 4 inches of snow.

Maximum temperature 48, minimum 5; precipitation, .76 inch.

DICKINSON:

The week opened with warm, pleasant weather but a cold wave on Monday afternoon caused hard freezes for four nights with a minimum of 15 degrees. The ground thawed by noon each day so that seeding and tillage was continued in the afternoons.

Seedings completed during the week consisted of the first date for the tillage and date-of-seeding of flax, a date-and-rate test of wheat varieties, the barley varieties, field peas for green manure on the rotations, and the grain plats on the wild oat experiments.

A block of crested wheat grass was seeded in rows on spring plowed wheat land. This makes about 8 acres of this grass now available on the station for increase of seed.

Several varieties of apple, crab and plum were planted April 18. Some vegetable varieties were planted in the garden April 22. A few of the more hardy vegetables were planted April 5.

Dickinson, continued:

A part of the alfalfa was worked with the spring tooth harrow. Both alfalfa and sweet clover are barely showing a little green above ground. Crested wheat grass was again the earliest of the grasses to start growth, and in amount of growth is now well ahead of everything else.

Visitors included Mr. F. E. Diehl and Mr. J. W. Church, of the Board of Administration, and Mr. R. C. Miller, Agricultural Engineer, North Dakota Experiment Station.

Maximum temperature 65, minimum 15; precipitation, .35 inch.
Precipitation to date in April, 2.04 inches.

MANDAN:

The past week has been cold, with temperatures below freezing on five days. It was the coldest week for the same period in April that has been recorded since the station started. The ground was frozen hard on several mornings, so that field work was delayed. There is some little anxiety over the country in regard to the effect of the heavy freezes on germinating wheat. The wheat in the rotations has just started to germinate, and appears to be in good condition at this time. Wheat that was seeded on March 30 is just coming through the ground.

The following seedings were made in the rotation during the week: Oats, brome-grass, sweet clover, peas, and barley. Barley was seeded on the 23rd, which is four days ahead of the average date. Fifteen acres of oats were also seeded for feed.

Crested wheat grass is making a good growth; sweet clover and alfalfa are just starting. Native vegetation has started growth, but there is as yet very little feed on the prarie.

Soil samples were taken during the week, and show the soil to be wet down from 10 inches on fall plowing, to about 16 inches on fallow. A light snow fell on one night.

Maximum temperature 53, minimum 17; precipitation, .20 inch.

Horticulture

During the week the spring plantings have been completed, and all mulch removed. The seed beds have also been planted. Raspberries and grapes have been uncovered and the stalks cut back.

Mandan, continued:

There does not appear to be nearly as much winter injury in the fruit plantings as in previous years.

A quantity of nursery stock has been received from the S. P. I., Chico, California. It has been kept there in cold storage for some time, and it is desired that it be planted here to test its vitality after lying in cold storage.

The first seeding of vegetables in the Acre and Coulee gardens was completed during the week, and included onions, parsnips, carrots, smooth peas, lettuce, radishes and spinach.

Transplanting of tomato selections for the tomato breeding project has been in progress during the week. The cold weather of the last few days has somewhat delayed this work.

Roses and other semi-hardy shrubs have been uncovered. There is less winter injury apparent this spring among this class of ornamentals than for many seasons past.

Arboriculture

Planting seed in the shelterbelt nursery has been carried on during the week, and will be practically completed today. The following seed has been put in:-

Variety	Date	Amount
Caragana	April 18	29 lbs.
Russian olive	" 20-21	253 "
Green ash	" 22-23	200 "
Boxelder	" 23	120 "
Chokecherry	" 23	20 "

The rain of last week put the soil in excellent condition for this planting.

Two year old Caragana seedlings were set out on April 19 in a double row space 2 x 10 feet, to replace the outside rows of willow and poplar on the west side of the snow trap of the main shelterbelt. This planting extends from the Soil house to the north line of the station grounds.

BELLE FOURCHE:

Cool, cloudy weather has prevailed throughout the week, and two light snow storms were received. The temperature has fallen below freezing nearly every night, and an unusually low temperature of 1 degree above zero was recorded April 21. Most of the heavy snow received last week has now disappeared, but work in the field will not be possible for almost a week. The roads are still very bad and are too heavy to permit travel by automobile.

Maximum temperature 50, minimum 1; precipitation, .19 inch.

ARDMORE:

The snow from last week's storm has been gradually disappearing, but many drifts still remain. No field work was done during the week and the fields are still so wet that it will be several days before field work can be resumed. The snow melted so gradually that almost all of the moisture went into the soil and the amount of runoff was small.

Maximum temperature for week, 49. Minimum temperature, 6. This temperature occurred on April 20 and is the lowest temperature ever recorded at so late a date at this station. The precipitation for the week was .05 inch.

ARCHER:

The week has been rather cool with large drifts of snow slowly melting, making the yards very muddy, and stopped the plowing of sod because of snow drifts. Work has consisted of fence repair, manure hauling, repair of machinery and shop building. Holes are being dug for trees today, April 23.

Maximum temperature 56, minimum 14; precipitation, .28 inch.

AKRON:

Soil remained too wet for field work until late in the week. Some disking and seeding was done on Friday and Saturday. Very little acreage of the spring sown small grains have been seeded as yet for, with the exception of a few days here the first of April, there has been no opportunity for field work. This will surely result in cutting down of the acreage of the early spring sown small grains and will mean late seeding of the acreage that is sown. The spring though, generally, is late, neither the crops planted the first of April nor weed vegetation as yet showing emergence. The damp, cool weather is very favorable for the winter wheat crop which is beginning to show on all soil preparations.

Akron, continued:

The fore part of the week was spent in constructing a fence around the perennial grass mixture and the sweet clover seeded last spring on sod land across the railroad. Both the perennial grass mixture and the sweet clover appear to have come through the winter in excellent condition. The stand of these crops on the sod land is in marked contrast to the stand seeded on old land on this side of the railroad.

The Sheep Rotation stubble fields intended for corn, and the Main Rotation stubble plats intended for corn and fallow were disked on Friday and Saturday to cut up the dead thistle growth of last fall. The first replication of the rate and spacing corn land and the stubble land intended for bean variety experiments were double disked. Last year's bean variety ground was seeded to Colburt oats. A fifth-acre and two three-tenth acre blocks on fallowed land were seeded to White Smyrna Barley C.I. 2642, to Prelude wheat, and to Hard Federation wheat, respectively, for increased seed supplies.

Plum buds in the fruit garden are swollen markedly this week end. It is expected this spring will show heavy losses in the fruit garden and in the forestry, expecially the Russian Mulberries in the forestry.

Five-hundred Western Yellow pine 2-year old replants were received early in the week but the ground has remained too wet to set them out. They are being kept in a damp, cool place in hopes their vitality will not be injured.

Professor Robertson, of the State College, was down Friday to seed the spring sown small grain nursery and to take stand data on the winter wheat nursery.

Professors Morton and Maynard were here also on Friday in the interest of live stock development.

Maximum temperature 62, minimum 18; precipitation, .44 inch.

NORTH PLATTE:

Except for the first two days, subnormal temperatures have prevailed for the week. A minimum of 20 degrees was reached on the 21st, and freezing temperatures occurred on several nights. This has caused some damage to alfalfa and spring seeded grain has developed very slowly.

North Platte, continued:

Alfalfa and brome grass were seeded on the 19th and potatoes planted on the D. L. A. rotations on the 21st. This completes all plat seedings except corn and sorghums.

Winter wheat is stooling well and is well above normal in condition for the time of year.

Samplings show the upper two feet of soil filled with moisture to carrying capacity and the third foot about one-half filled.

COLBY:

Weather conditions remained such that field work was not done during the week. Another inch rain was received the first of the week. This makes the surface foot contain approximately its water holding capacity. This afternoon .25 inch of water fell in a gentle shower. There was no runoff from any of the rains so far received. A minimum temperature of 23 degrees was recorded this week. This was the lowest temperature so far for the month. Unless it is the fruit trees, there is no vegetation that shows the effect of the low temperature; this is noticeable, for the ground remained frozen until approximately noon of the day following the freeze.

The thin wheat that was punished so severely by the winds this spring has not responded to the moisture as one might think. The spring grains are growing nicely. A trip was taken through the southern part of the county by the writer on Thursday of this week to view crop conditions with Mr. E. C. Paxton, Crop Statistician, from Topeka, Kansas. There are many fields of excellent wheat in the southern part of the county. These fields are where two severe hail storms went through the county last summer and also where a large rain was received in either August or September. The limits of these various storms limit the fields of wheat. For the most part the fields are either good or failures, depending upon the distribution of the last season's precipitation.

Corn will go into many of the fields of thin wheat. Apparently, from reports, a very large acreage will be summer tilled. There is also a large acreage of barley seeded. Barley looks excellent wherever it is seeded.

Colby, continued:

Work during the week has consisted principally of repairing and painting of screens.

Pastures are greening up but are very short. Within two weeks they should furnish some pasturage. Stock, both cattle and horses, in the county are very poor; apparently no more feed than absolutely necessary was purchased.

HAYS:

The weather during the week has been generally cool and pleasant. The temperature dropped to freezing point two nights with a heavy frost one night. How much the fruit was damaged by the low temperature is not yet known, but it crimped all the tender early garden plats and killed the Russian thistles and fox tail grass of which there was much in most fields. Thus far it appears little or no damage was suffered by the small grain crops. The growth of alfalfa and the heavy growth of wheat on fallow looked very bad the first day after the freeze, but most of it has revived and again seems about normal, except where the growth had lodged most. Some of this seems to be injured.

The damp weather has forced the growth of wheat on fallow to a height of 15 inches and most of it is lodging. On the three-year fallow the wheat is so badly lodged that it has a poor chance to make anything. On the early fall plowed ground it is about 9 inches high and looks the most promising of any at this time. On the listed ground it is about the same height, but has not as good color. Stubble ground disked early, and stubbled in, where the ground was fallowed or fall plowed for the previous crop is the same height, but it is even lighter green than the listed ground wheat. The wheat on these preparations has not stooled so much as that on the fallowed and fall plowed ground, which may prove to be some advantage later. On the continuously stubbled in, the late disked, and the continuously disked ground, the wheat all looks very poor, being thin, not tillered, short, and poor color. On corn stubble ground the wheat is very uneven in growth but the color is good. On milo stubble the wheat looks much the same. On kafir stubble the growth is uneven and more streaked and not so good as on corn and milo stubble. On kafir ground, where the stover was left on the ground, the wheat is very small, most of it not having germinated until the snow water furnished the moisture. This wheat is thin and much behind all the other wheat except that continuously stubbled in.

Hays, continued:

On the 9, 10, and 11-peck rate of seeding on fallow, the wheat now looks the most promising of any wheat sown on fallow. The growth on these plats, especially on the 10 and 11-peck rates, thus far has not lodged. These are the only fallowed plats on which there has been no lodging. There appears to be more stalks on these thicker rate seedings than on the 4-peck rate, but the stalks stand upright apparently a little stiffer and the leaves appear to be both a little shorter and slightly narrower. These plats are very interesting at this time.

Although the rainfall has not been so heavy in this locality, it has been so distributed during the past two or three weeks that it has been difficult to get field work done.

Maximum temperature 69, minimum 24; precipitation .48 inch.

GARDEN CITY:

Cloudy weather has prevailed throughout most of the past week. A shower yielding a half-inch of rain was received last Monday morning. It came down slowly and was taken up well by the soil.

The temperature dropped to 24 Wednesday night, causing considerable damage to fruit and early flowering shrubs. Alfalfa was badly wilted but seems to have recovered pretty well from the effects of the freeze. The temperature stayed down long enough to freeze ice from a quarter to a half inch thick. No other below freezing temperature was recorded during the week.

The small grains continue to make a satisfactory growth. The growth of winter wheat on fallow is most too great, if plenty of moisture is not received from now until harvest.

Irrigation of alfalfa was started Thursday. Work was started yesterday on the new milk house.

Maximum temperature 77, minimum 24; precipitation .5 inch.

TUCUMCARI:

Plowing was attempted during the week, but the soil was so dry and work was so unsatisfactory this was discontinued. Some early listing was done, but station field work generally is far behind. Many farmers have ceased work on the land, preferring to wait until the soil is in better condition. Precipitation for the past four months totals .51 inch, received on ten dates.

Tucumcari, continued:

Odd-time jobs, such as painting stakes, treating seed grain, watering trees, and repairing of gates and fences, have consumed most of the time during the week, while a number of apple and pear trees were sprayed.

A temperature of 28 degrees the morning of the 21st apparently injured some fruit, although cherries, late apples, and some peach trees still seem unharmed. Compass cherry-plum, about two weeks earlier than sour cherries on this station, were doubtless completely killed, while young fruit on several plum trees shows serious injury.

Maximum temperature 80, minimum 28; precipitation 0.
Evaporation, 2.374 inches. Average hourly wind velocity, 8.4 miles.

BIG SPRING:

Weather conditions have varied considerably during the past week. The first half was warm with summer temperature prevailing. This was suddenly changed by a norther which arrived the night of April 21. At this time the temperature dropped to 30 degrees above zero. Some of the tender foliage was killed back, but otherwise no damage was done.

Milo, Higari, and Sudan of the April 5 date of planting are up to good stands, and the other sorghums are coming up. Cotton has not started to emerge as yet.

Work this week has consisted mainly of cleaning out the orchard and digging Johnson grass. Several patches of this grass have gotten started on the station. By consistent digging and hoeing it is hoped to eradicate them this year.

Considerable cotton and feed has been planted in this country during the past week. A heavy wind during the night of April 20 blew out a large per cent of the seed that had been planted on the light, sandy soils.

Maximum temperature 90, minimum 30; precipitation .10 inch.

LAWTON:

A wide range of temperatures, intermittent periods of high wind velocity, and threatening storms characterized climatic conditions the past week. On the 20th the temperature dropped from a maximum of 81 to a minimum of 32, resulting in a heavy frost that night. Since 1901 there is but one record of a killing frost at a later date and that was May 1, 1903.

Lawton, continued:

Grapes and vegetables indicated the most damage. Although corn is severely retarded in growth the present injury appears temporary. Alfalfa and sweet clover do not show damage and continue a vigorous growth. A rank growth of small grain continues and winter barley varieties are in full head. Development of leaf rust on wheat, which was so rapid a week ago, seems somewhat abated.

Spring plowing on rotation plats was completed April 22. The first planting of grain sorghums, including all varieites, was done April 20. Sumac and Sudan were also planted on that date. Six varieties of cotton were planted April 21. The weather is too cold at present to favor rapid germination of any of the above crops, even though the seed bed was in optimum condition.

Precipitation in the form of light showers during the week totaled .18 inch.

WOODWARD:

The fore part of the week was spent on road work and odd jobs as wet weather rendered field work impossible. The last half was spent in the field, full force, with teams to make up for lost time, and putting up grape trellises and planting grape cuttings.

Our first date of planting of cotton was planted two days late, on the 22nd, because soil was too wet on the 20th.

The temperature went down to 29° after the rain and froze thin ice on water surfaces, but did slight damage to fruit. Grapes on the trellises were not injured or were slightly injured, but young vines on the ground were frosted somewhat.

Spirea Van Houttii is in bloom and is the best in several years.

The rain has made the prospect for a wheat crop exceedingly bright. With both wheat and fruit as distinct possibilities, people are very optimistic, and the prospects of machine companies to sell many tractors and combines were never better.

Maximum temperature 82, minimum 29; precipitation 1.13 inches. Evaporation, 1.232 inches. Average hourly wind velocity, 8.3 miles.

NOTE:

Numerous plant specimens are sent into this Office for identification each season. Very often they arrive in such broken or crumpled condition that they cannot be identified. It would, therefore, be far better to prepare good herbarium specimens, by putting the plants as collected in folders of a single newspaper sheet, drying between blotters, and sending them to Washington in the newspaper sheets in which they were pressed, secured between strong cardboards. Not only will they then be easier to identify, but can often be made further use of here, either in Department herbariums or as exchange material with foreign countries. At present the Department is especially in need of members of the Composite family, such as sunflowers, daisies, gaillardias, etc., and any which can be collected and sent in without detracting from other work will be gratefully received.

Field men may, if they desire, build up herbariums of their own by collecting specimens in duplicate, assigning numbers to them, and keeping one themselves. A list of identifications can then be returned by number.

The following notes should be sent with each specimen:

Locality and date of collection
Habitat (a brief description, such as heavy soil, etc.)
Name of collector.

Blotters for drying plants may be secured by writing to this Office for them.

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BUREAU
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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR WEEK ENDING APRIL 30, 1927.

HAVRE:

The week was quite favorable for farming operations. The maximum temperature of 80° on the 26th and 28th aided very materially in starting grasses and winter crops. Small grains on the rotations will all be seeded this week.

Winter wheat stands are going to be more spotted than usual. In places where there was any killing the plants all seem to be dead. Other areas immediately adjacent show 100 per cent survival.

There has been some injury to old alfalfa plants. This apparently was due to late freezing as most all of these plants had budded before the freeze of last week. It appears that many of these plants are starting but the growth will be delayed. There are undoubtedly some plants that are killed.

Maximum temperature 80, minimum 37; precipitation .02 inch.

JUDITH BASIN:

Favorable growing weather has prevailed during the greater part of the week. The temperature dropped below freezing only one night. Precipitation for April is 1.17 inches, .12 of an inch below normal.

Seeding operations have progressed and, with the exception of flax, all the early sown crops have been planted in the rotation experiments and on the cereal project.

Winter wheat is making favorable growth. The furrow drill wheat is a little further advanced than that of the ordinary drill. Stands with both methods appear favorable and most farmers are reporting winter wheat to be in good shape.

Forage crops are making good early growth although the alfalfa and sweet clover is just getting started.

Maximum temperature 77, minimum 26; precipitation 0.

HUNTLEY:

Fair weather throughout the week permitted field work to be resumed after the recent storm period.

All plats previously prepared for seeding were again harrowed to kill young weeds just coming up. Following this cultivation all spring crops except corn were planted in the rotation and pasture experiments. Plowing for corn and the preparation of land for miscellaneous crops is now under way.

Huntley:

Soil sampling has been in progress throughout the week and the first round will probably be completed today. From observation it appears that all plats have available moisture to a depth of about two feet, irrespective of the cultural treatment.

The last few days have been quite warm and fall sown grains and the perennial crops have responded to the favorable conditions with a very noticeable growth. In the pasture experiments, winter rye, alfalfa, and brome grass will soon be ready for grazing.

Maximum temperature 84, minimum 29; precipitation .19 inch.

SHERIDAN:

The entire week was quite favorable for field work. The snow disappeared rapidly the 16th and 17th, and sod land was sufficiently dry to resume breaking by noon of the 18th. Seeding of the rotation field was begun the 19th. Some plats still remained rather wet at that time, but most of the land was in good shape. All early seedings in the rotations, the varieties and rates of seeding of small grains, and the dates of seeding to date, were seeded during the week. Seeding of alfalfa, sweet clover, grasses, and field peas yet remains to be done, but the most of the land has been prepared for these crops, as well as for some field seedings of grain.

The April 2 seeding of small grain emerged with a good stand early in the week. Some of the grass seeded at that time also has emerged. Fall seeded grain and perennial crops made some growth under the snow, and growth has been rapid during the last week.

Maximum temperature 81, minimum 35; precipitation, Trace.

DICKINSON:

The weather continued dry and warm, and windy on six days of the week. Field work continued all week but the wind was too high at times for some jobs, such as nursery seeding.

Seedings during the week included the wheat, oats, and barley in the cereal nursery, increase blocks of Ceres wheat and Victory oats, the field pea varieties, and a patch of creasted wheat grass on sandy land on the west side of the station. Some potatoes were planted in the garden. A few spruce trees were received and planted.

Dickinson, continued:

Wheat, oats and barley seeded on the rotations April 9-13 are emerging with good stands on all tillage methods. Last year the fall plowing was so dry that some of the plats never had a full stand.

Winter wheat and winter rye plats on the Normal School field were reseeded to spring wheat. On the Main Field the rye seeded in stubble has a fairly good stand. Most fields of rye are looking fairly well in the locality.

A comparison of duckfoot and plowed fallow is being made on three dates this year. On April 30 a plat was worked with the duckfoot and one plowed. This will be repeated about May 15 and June 1.

Alfalfa and grass in rows was cultivated and the balance of the alfalfa was worked with the springtooth harrow.

Both alfalfa and sweet clover have been very slow in starting growth. The most advanced alfalfa and sweet clover are only about 2/3 inches in height, while crested wheat grass in rows averages about 8 inches.

Maximum temperature 76, minimum 27; precipitation .06 inch.
April precipitation amounted to 2.10 inches.

MANDAN:

Agronomy

The past week has been very favorable for all field work. It was warm, and all crops are making a good growth. All wheat is up for a good stand.

Sweet clover and alfalfa were seeded in the rotations for the Office of Forage Crop Investigations. Alfalfa was seeded in rotation 42. About three acres of barley were seeded for feed. Alfalfa and sweet clover are just making a start.

Maximum temperature 75, minimum 33; precipitation .01 inch.

Cooperative Grazing Experiment

Native vegetation has made a rapid growth during the week. There is now enough grass to furnish grazing.

The ten acres of sweet clover was again seeded. There is very little sweet clover from the 1926 seeding.

Mandan, continued:

Thirty head of steers arrived from the Agricultural College today, and 40 head were delivered at the pasture, that were wintered on the river bottoms near Mandan.

Horticulture

Fruit trees are now starting growth, and some of the plums will probably be in bloom within a week. Apparently there is very little winter killing.

The first seasonal spray is now being applied, both sprayers being kept busy in order to complete the work before the trees bloom.

Shipping fruit trees to stations and horticultural cooperators has been completed.

A number of trees in the "Planting Systems" experiment have been pulled out because of blight. Transcendent and Hyslip crabs in this experiment and in the "Pruning" experiment have been removed and more blight resistant varieties will be planted in their place. Pyrus baccata seedlings in the "Planting Systems" experiment have also been removed as they seemed to be very susceptible to blight.

Rabbits damaged apple trees very severely last winter. It was necessary to cut a large number of them down to the ground as the trunks had been girdled.

Transplanting of tomatoes for the breeding project and other experiments, which has been in progress during the week, has been completed.

Rhubarb has been usable for the last few days, and the first cutting of asparagus was made today.

Chinese apricot (Prunus armeniaca) is in bloom on the grounds. It is the first shrub to blossom, and is very pretty with the branches completely covered with dark pink buds and blossoms.

Arboriculture

The week has been spent in digging and shipping evergreen transplants. Shipments were made to 51 shelterbelt cooperators, and several of the field stations. The stock this year is excellent, and consists of Colorado Blue spruce, Black Hills spruce, White spruce, Norway pine, Scotch pine and Jack pine.

Mandan, continued:

Mr. O. D. Howell, Superintendent of Buildings, Dairy Division, and an assistant, Mr. Elmer Barr, have arrived from Washington, D. C., and will take charge of the Dairy construction work here.

Numbers of farmers have been calling each day, interested more particularly in trees, fruits and pasture grasses. High School classes and instructors visited from Judson, N. Dak., and Lark, N. Dak. About 50 farmers are here today from Douglas, N. Dak.

BELLE FOURCHE:

Clear, warm weather has prevailed throughout most of the week. Only a trace of precipitation was received, and strong winds every day have materially hastened drying of the soil, but the fields are still too wet to permit farming operations.

The condition of both winter wheat and winter rye has made a distinct improvement during the past week. Winter wheat has commenced a vigorous growth on all plats except those continuously cropped. Reseeding of the continuously cropped plats will evidently be necessary. Sweet clover and alfalfa have resumed growth, and bromegrass is about three inches high.

Maximum temperature 78, minimum 29; precipitation, Trace.

ARDMORE:

Temperatures during the week were the highest of the season. The snow drifts disappeared early in the week and some of the land was dry enough to plant by the 27th. The barley and peas in the rotations and variety tests were planted during the week.

All of the grain in the fields is now up, and the wheat and oats in the variety tests have emerged. The soil on many of the plats, particularly those spring plowed, has crusted badly and stands are likely to be reduced by this factor. The spring plowed plats crusted so badly that it was necessary to harrow them.

Cultivated grasses made good growth during the week. Brome grass is now about five inches in height, crested wheat four inches, slender wheat six inches, and alfalfa three inches. In the native pastures the western wheat grass reached the height of five inches and the western blue grass four inches. Buffalo grass and grama grass are beginning to grow.

Maximum temperature 85, minimum 28; precipitation .01 inch.

ARCHER:

The week has been favorable for field work in that the temperature has been mild without any marked precipitation.

Practically all tillage operations for spring crops in the experimental field have been completed and today the Dry-Land plats are being staked in order that seeding may begin Monday.

From April 27 to 29 the sunflowers were seeded with a lister in the dairy field. About 20 acres of sod have been plowed and disked. This will be seeded to corn for the dairy.

The prairies are getting quite green and the dry stock have been turned in to feed off the grass in the east dairy field.

Mr. Willis, Landscape Architect of the University of Wyoming, visited the station, April 29.

Maximum temperature 78, minimum 28; precipitation .13 inch.
Precipitation for April, 1.28 inches. Normal, 1.93 inches.

AKRON:

The past week has been favorable for field work and good progress was made towards bringing the field work up to date. Four acres were seeded to mixed oats and barley on land which last year grew the General Forage Variety Experiment. This will give small grain stubble preparation for the General Forage Variety Experiment another year.

The rate and spacing corn ground was double disked to cut up and incorporate the dead weed growth with the surface soil. The rotation extension plats for corn were duck foot cultivated. Sheep rotation farm 28 corn field was plowed and packed as was also the first replication of the rate and spacing corn land. The 500 2-yr old replant Western Yellow pines were planted, apparently in good condition despite their week's enforced dormancy imposed by the wet condition of the soil.

Lot No. 2, consisting of 6 ewes and 6 lambs were turned onto the 2-acre rye field of sheep rotation farm 51, today, April 30. Lambing is about 90% finished. The lamb crop was very good this spring, approximately 3 ewes out of 5 producing twins. The survival to date, however, is but little more than 100%. Very many of the lambs were born lifeless and were unable to get to their feet to suckle. The lambs were large and well developed, however, showing some constitutional weakness which it seems possible to attribute to the millet hay fed to the ewes during the winter months. The millet hay fed was really ripe millet from which the seed had not been removed.

Akron, continued:

Russian apricot broke into full bloom about the middle of the week before any leaves had opened out. Plums and apples are about ready to break into leaf and bloom. Caragana is breaking into leaf, the first of the trees or shrubs to show spring activity as evidenced by leafing-out.

Mr. Eddy was down Friday from Fort Collins to take some pictures of the rate and date winter wheat experiment for the college.

Director McCann and District Agent R. E. Felts, and County Extension Agent Foster were here a short time this afternoon arranging some details of a County Agent tour which would take in this station.
Maximum temperature 85, minimum 30; precipitation .21 inch.

NORTH PLATTE:

Excellent growing conditions have prevailed during the week. The temperature has been high and no rain has occurred. A maximum of 89 degrees occurred on the 26th. Minimum temperatures have been above 40.

Grain crops, alfalfa and pastures have grown rapidly. Preparation of land for corn has been begun.

The writer spent the 25th in Buffalo and Dawson Counties with Prof. W. W. Burr and several others from the Lincoln Station, inspecting alfalfa fields in which severe killing out has occurred. This appears to have resulted chiefly from winter injury, although some wilt was discovered and drought has probably played a part. Fields of Grimm and other hardy strains are in much better shape than those seeded with common seed.

COLBY:

Another rain of more than an inch fell the evening of the 28th of April. Most of this fell in a short time so that there was considerable runoff.

Winter wheat is not making much growth but so far the weeds are not offering competition. A few warm days should soon show whether the wheat will get ahead of the weeds. In by far the most cases the wheat is too thin to expect much of a crop, if any.

Colby, continued:

Barley and spring wheat on the project show a good stand and excellent growth. Oats are growing nicely but the stand in some instances may be too thin to choke out the weeds.

Precipitation for April was 3.53 inches. This was well distributed and with the exception of the last rain, noted above, there was very little runoff.

Corn planting has started in the county. It is not planned to start planting corn on the station before the 9th of May.

Apple and cherry trees are in blossom.

HAYS:

The weather during the week has been generally very favorable for crop growth although by the end of the week the winter wheat is beginning to show slightly the effect of the decreasing amount of moisture left in the soil. The wheat is not suffering, but the growth is slightly less rapid and stands up better. The growth is so heavy, especially on fallow, it has been lodging considerably. At this date there is little lodging except on the three year fallowed ground, Rotation 570.

The spring small grains are looking fine and nearly cover the ground. Canada field peas are also looking very good. Also the new seeding of brome grass is coming along in good condition, and alfalfa recently seeded is up to a good stand.

The fifteenth annual Round-Up was held on the station today. The weather was fair and the attendance was estimated from 1,000 to 1,500. Among the visitors were several from the Kansas State Agricultural College including Deans Call and Umburger, Professors Throckmorton, McCampbell, Dickens, Bell, Moxley, Coe, Aubel and Bender. Visitors from the branch stations include Messrs. Chilcott, Sieglinger and Locke from Woodward, Oklahoma, and Barnes and Kuska from Colby, Kansas.

Maximum temperature 88, minimum 39; precipitation .35 inch.

GARDEN CITY:

The past week has been one of rather high temperatures and considerable wind movement. These two conditions have caused winter wheat on the poorer methods to show the need of moisture. Wheat that made a rather vigorous early growth seems to be running out of moisture and is turning brown near its base. On ground that was cropped to wheat last year dry soil is found at a depth of from eighteen inches to two feet. Moisture is found in only about the upper three feet on land that was fallowed last year.

Garden City, continued:

Field work consisted of sampling soil, disking fallows and the area that is to be planted to sorghums the fifteenth of May, staking off plat ends, and general odd jobs.

Maximum temperature 91, minimum 43; precipitation 0.

Total precipitation for April, 1.59 inches, as compared with an average of 1.92 inches.

DALHART:

The weather the past two weeks has been dry and windy with no favorable signs of rain. On the 18th a small precipitation of .02 inch was recorded. There has been considerable wind with cool nights prevailing. The days have been quite warm. On the morning of the 21st a heavy freeze was recorded, the temperature dropping to 24 degrees. This freeze killed all the peaches, plums, etc., and from 75 to 100% of cherries, depending upon the variety.

Field work has progressed without delay. Considerable work has been done with the field cultivator and disk. Some of the listing was done on plats to be spring listed. The alleys of all wheat and rye plats were measured off and hoed to plat lines. The land is being prepared today for the first date of planting for cotton, which will be made Monday, May 2, if weather conditions will permit. One plat was prepared and planted to artichokes on April 20. The orchard and vineyard have been cultivated with the field cultivator to kill the weeds just starting and to hold the land from blowing. Oats were planted on April 16 and emerged to a good stand in a few days.

Winter wheat and rye are making considerable headway. The rye plats in the west field are rather spotted as to growth but a good stand prevails on all of the plats. Wheat looks much better than the rye. Oats are making slow growth but the color is good and a good stand prevails for all plats, etc. Sweet clover planted in the dates is emerging to a fair stand for the March 15 date but the previous dates are very poor. This may be due to dryness of the soil and soil blowing. The field was covered with stalks and manure as much as possible to hold it from blowing and very little blowing took place. However, the stand is not showing up good at present.

Maximum temperature 91, minimum 37; precipitation 0.

BIG SPRING:

Weather conditions have remained hot and dry during the past week. The temperature has been unusually high for this season of the year, and the hot winds that prevailed seemed more like those of August than of April.

Big Spring, continued:

The soil has dried out so rapidly during the past two weeks that there is not enough moisture for planting purposes. Most of the farmers who had started to plant have had to stop, because there is not enough moisture to germinate the seed.

The April 15 date of planting of sorghums came up to fairly good stands but there was not enough moisture to bring up the cotton planted on that date. The winter wheat plots are all showing the effects of the dry weather.

Work during the week has consisted mainly of cleaning out fence rows and tree rows. The field that is to be used for the cooperative work this year was gone over with the duckfoot cultivator.

The cotton from a number of individual plant selections was ginned this week. The seed is to be used for some plant to row work this year.

Maximum temperature 99, minimum 40; precipitation 0.

TUCUMCARI:

A trip this week over the wheat growing section of the county showed that a large majority of wheat fields are beyond recovery. The crop on fallow land will be able to withstand a reasonably prolonged drought, although the possible yield is rapidly being lowered. The majority of fields will be fallowed or planted to row crops, depending on whether rainfall is heavy the next six weeks, for in most cases the plants on at least 60% to 80% of the ground are dead. Station M.C.D. rye is heading, plants on a portion of the MCB plat are still alive, and perhaps one-third of the MCD wheat plat is covered by living plants. Rainfall in the wheat growing sections of the county was somewhat heavier than on the station, where only .51 inch has been recorded since Christmas.

Soil moisture samples taken early this month showed a reduction from the November sampling. Field work has been discontinued and it is doubtful whether the lister can be run deeply enough Monday to place cotton seed in moist soil.

Since weather records were begun at Tucumcari in 1905 no period, January to April, has been so low in precipitation, the average for this four months period being 3.39 inches. This April was the second warmest on record and second highest in evaporation, 9.443 inches.

Tucumcari, continued:

The Ford truck has been overhauled, trees and shrubs watered, orchard trees sprayed, some painting and fence repairing done, and fields have been staked the past week.

Maximum temperature 92, minimum 38; evaporation, 2.198 inches.
Average hourly wind velocity, 4.3 miles.

LAWTON:

Fairly good growing weather prevailed during the past week. The temperature ranged from 39 to 85 and wind movement was rather spasmodic. Corn has not yet recovered from the frost damage and continues a sickly appearance. Small grains and grasses are growing rapidly. Grain sorghums planted April 20 are just emerging but none of them are up to a stand yet. The various strains of feterita show the slowest germination.

Considerable interest in the use of combines throughout the county is being manifested this spring. It is likely that 5 or 6 will be in operation during harvest. The tendency to grow small grain on a larger scale seems to be increasing.

WOODWARD:

Weather during the week has averaged rather clear and warm, with a maximum temperature of 92° on the 28th. Small grain crops have made a rapid growth and will be needing rain again soon. Trees, shrubs, etc., are well in leaf and are very thrifty and pleasing in appearance.

The fine weather has permitted farm work at the station to be carried on without interruption and considerable blank listing and disking of crop fields was done. The vineyard, orchard and windbreak trees were disked, and orchard and ornamentals were sprayed. Trellises were built for the new grape vineyard on the Dairy farm. Rye on the check plots was cut for hay on the 29th, and is being shocked today.

Messrs. Chilcott, Locke, and Sieglinger, of this station left by auto-the morning of the 29th to attend the Annual Roundup at the Field Station, Hays, Kansas.

Maximum temperature 92, minimum 42; precipitation .03 inch.
Evaporation, 1.448 inches. Average hourly wind velocity, 6.7 miles.